

****ATTENTION****

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FACTS

The four species of hummingbirds that visit Washington are only 3 to 4 inches long from end to end. Their bodies are no bigger than the end joint of your thumb and they weigh no more than a nickel. Yet they expend more energy for their weight than any other animal in the world. This energy is used mainly for flying and for keeping their tiny, heat-radiating bodies warm.

Hummingbirds are like living helicopters. They can hover, fly straight up and down, sideways, backwards and even upside down. This is possible because their wings rotate from the shoulder instead of the wrist, so they get power from both the downbeat and the upbeat. While their average flight speed is 27 miles per hour, they can travel up to 50 miles per hour, with their wings beating 200 times a second.

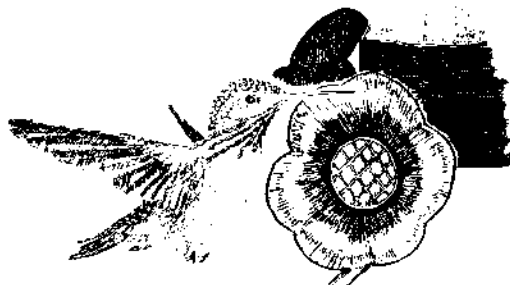
Although hummers often nest in lower tree branches and bushes, people rarely notice the golf ball-sized nest. The female assumes all nesting duties. She sculpts a cup of plant parts, mosses and lichens held together with spider webs for her nest. In it she lays 2 pea-sized, white eggs and incubates them for 14 to 21 days. Once hatched, she feeds the young ones a rich diet of regurgitated nectar. After about 25 days the youngsters leave the nest to survive on their own.

In this country, hummers are eaten by kestrels, magpies, jays, crows, cats, fish, frogs and even some large insects. Tropical storms and killing frosts are also responsible for some deaths.

Most hummingbirds eat nectar from flowers for instant energy, and insects for protein to build muscle. Protein meals include aphids,

small insects and spiders. Hummers meet their high energy demand by eating more than half their weight in food and drinking up to 8 times their body weight in water every day. To eat and drink, a hummingbird's tongue is divided at the end into two rolled, muscular halves. These halves act like a double trough to soak up nectar and water, while the brushy tips of the tongue trap insects.

In cooler climates like Washington, hummingbirds gather food in their tiny crops (throat pouches) before dark. Then they slowly digest this stored food throughout the night. Hummers also lower their body temperature and heart rate at night to save energy and ensure that the food supply in their crop will last until morning.



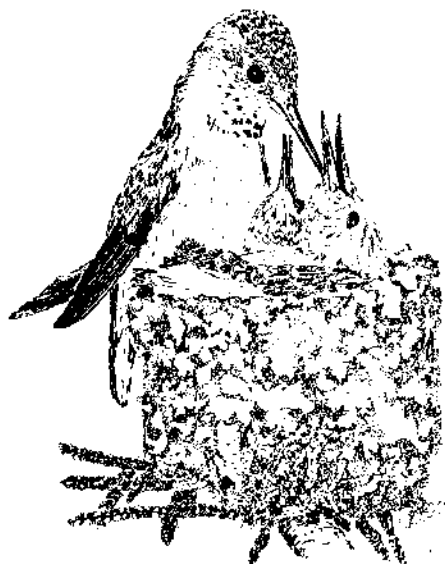
There are two ways to attract hummingbirds to your yard—artificially by using feeders with nectar-like sugar solutions, and naturally with flowers, bushes and trees that produce nectaring blossoms. A combination of both is recommended: flowering plants for their nectar and insects, and a feeder or two for your viewing pleasure.

FEEDERS

Select feeders that have red on them somewhere to attract hummers. Multi-station feeders seem to work better than glass tube and spout feeders. Choose feeders that come apart easily so they can be cleaned thoroughly. Molds and bacteria will spoil your sugar solution after several days of hanging in warm weather.

CLEANING

Don't forget to clean and change the solution in your feeders about every 4 to 5 days. Clean feeders thoroughly with a bottle brush, hot water and a little vinegar to discourage mold (do not use any soap or detergent). Don't hang out more feeders than you have time to clean and maintain. Poorly cleaned feeders are a hazard to the birds' health.



SOLUTIONS

Some commercially-produced solutions offer a formula complete with vitamins and minerals. Any solutions with dye, food coloring or flavoring in them are considered unsafe and aren't needed. Red coloring isn't necessary because most feeders already have something red on them to attract hummingbirds.

Hummingbirds can get fatal hardening of the liver from eating a heavy sugar syrup. For that reason a solution that is no more than 1 part sugar to 4 parts water is recommended. Boil the water, stir in the sugar, and remove the solution from heat. This will retard mold growth. Let the solution cool before filling your feeder.

Don't use honey or artificial sweeteners in your feeder. Honey helps fungus grow and contains botulism toxins that can kill hummingbirds. Birds may quickly starve to death eating artificial sweeteners because they contain no calories.

LOCATIONS

Place your hummingbird feeder where you can watch it and where it can be easily reached for cleaning and refilling. Shady spots are best for keeping the sugar solution cool, which keeps mold growth down.

To protect the solution from being diluted with rain, put a clear plastic dome over the feeder. Since hummers tend to fight over feeders hung close together, placing them far apart or out of sight of each other will attract more birds.

Plant or place nectar-producing blossoms near feeders so hummingbirds will also have insects and natural nectar for a more balanced diet.



PROBLEMS

If your sugar solution attracts ants, bees or wasps, apply petroleum jelly around the openings of the feeders and on the wire from which it hangs. Or try moving the feeder to another spot. Don't use insect sprays or repellents to control insects on or around the feeder. If stinging insects are a problem, try spraying a fine mist of water from a hose onto the feeder. The water will at least chase away the insects for a while, and the hummers will enjoy the shower.



PLANTS

Hummingbirds are best attracted to nectar-rich plants with bright red, orange or red-orange tubular-shaped blossoms. The brightest red flowers are perhaps the most effective, so you may want to begin with these. Hummers prefer single-flowered blossoms because they have more nectar than double-flowered ones.

By planting hardy trees, bushes, vines and perennial flowers, you'll have a more permanent hummingbird garden that will need little care. Select plants that grow to be 2-feet tall or taller. This gives hummers a more comfortable level to feed at. Birds will also visit hanging potted plants if the right blossoms are available.

When planting a garden or border for hummingbirds, it's best to put vines, tall bushes and tall flowering plants in back, then the medium-sized plants down to the shortest plants in front. To supply birds with food throughout spring, summer and early fall, select plants that bloom at different times of the year.

It's a good idea to buy from sources that offer a limited warranty or an agreement to replace your plants if they fail to grow. Nurseries can help if you have problems finding the plants you need.

Seed companies, seed catalogs, garden societies and plant sales are good places to locate native plants. Sometimes it's possible to get native plants from developers who are clearing land. Another method is to gather native plant seeds in the fall and try growing them next spring.

To help get you started, you'll find a list of plants that attract hummingbirds on the following page.

FLOWERING PLANTS *that attract hummingbirds*

Plant	Bloom Times (listed in order)	Plant	Bloom Times (listed in order)
TREES		FLOWERS	
Black Locust (<i>Robinia pseudoacacia</i>)	March	Annuals	
California Buckeye (<i>Aesculus californica</i>)	April - May	Petunias (<i>Petunia</i> spp.)	April - Oct
Flowering Crabapple (<i>Malus</i> spp.)	April - May	Snapdragon (<i>Antirrhinum majus</i>)	June
Hawthorns (<i>Crataegus</i> spp.)	April - May	Fuchsias (<i>Fuchsia</i> spp.)	June - Oct
Red Horsechestnut (<i>Aesculus camea</i>)	April - May	Jewelweed (<i>Impatiens capensis</i>)	June - Oct
Silk or Mimosa Tree (<i>Acacia dealbata</i>)	June - Aug	Scarlet Sage (<i>Salvia splendens</i>)	July - Sept
		Dahlia (<i>Dahlia merckii</i>)	July - Oct
SHRUBS		Perennials	
Elderberry, red (<i>Sambucus callicarpa</i>)	March - July	Lungwort (<i>Mertensia</i> sp.)	April - May
Twinberry (<i>Lonicera involucrata</i>)	March - July	Bleeding Heart (<i>Dicentra spectabilis</i>)	May - June
Flowering Currants (<i>Ribes</i> spp.)	April - June	Columbines (<i>Aquilegia</i> spp.)	May - June
Flowering Quince (<i>Chaenomeles japonica</i>)	April - May	Delphinium (<i>Delphinium cardinale</i>)	May - July
Azaleas (<i>Rhododendron</i> spp.)	May - June	Delphinium (<i>D. nudicale</i>)	May - July
Beauty Bush (<i>Kolkwitzia amabilis</i>)	May - June	Hollyhock (<i>Althaea rosea</i>)	May - July
Siberian Pea (<i>Caragana arborescens</i>)	May - June	Gladiolus (<i>Gladiolus cardinalis</i>)	May - Sept
Weigla (<i>Weigla florida</i>)	May - June	Scarlet Bergamot (<i>Monarda didyma</i>)	June - July
Rose of Sharon (<i>Hibiscus syriacus</i>)	July - Aug	Foxglove (<i>Digitalis purpurea</i>)	June - July
Butterfly Bush (<i>Buddleia davidii</i>)	July - Sept	Firebird Penstemon (<i>P. gloxinoides</i>)	June - July
		Scarlet Penstemon (<i>P. barbatus</i>)	June - July
VINES		Blazing Star (<i>Liatris</i> sp.)	June - Aug
Clematis (<i>Clematis</i> spp.)	April - Aug	Coral bells (<i>Heuchera sanguinea</i>)	June - Oct
Morning Glory (<i>Ipomea coccinea</i>)	June - Aug	Tall Phlox (<i>Phlox</i> spp.)	July - Sept
Trumpet Creeper (<i>Campsis radicans</i>)	June - Aug	Cardinal Flower (<i>Lobelia cardinalis</i>)	July - Oct
Honeysuckles (<i>Lonicera</i> spp.)	June - Oct		
Scarlet runner beans (annual)	July		
(<i>Phaseolus coccineus</i>)			

REFERENCES

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 The Life of the Hummingbird by A.F. Skutch, 1973



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